

Xi (Alice) Gao

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Appointments

Assistant Professor, Teaching Stream , University of Toronto	2022 - Present
Lecturer in Computer Science , University of Waterloo	2017 - 2022
- Co-Chair of Women in Computer Science Committee.	2020 - 2022
- Advisor in Computer Science.	2018 - 2022
- Member of Lecturer Hiring Committee.	2020
- Member of Undergraduate Academic Plans Committee.	2019 - 2020
- Member of Women in Computer Science Committee.	2017 - 2019
Postdoctoral Fellow , University of British Columbia	2014 - 2017
- Hosted by Kevin Leyton-Brown.	
- Funded by Canadian NSERC Postdoctoral Fellowship.	

Education

Harvard University, Cambridge, MA, USA	2014
Ph.D. in Computer Science	
- Dissertation: Eliciting and Aggregating Truthful and Noisy Information	
- Advisor: Yiling Chen	
University of British Columbia, Vancouver, BC, Canada	2008
B.Sc. Combined Honours in Computer Science and Mathematics	

Teaching Experience

CSC 384 Introduction to Artificial Intelligence , University of Toronto	
1 section.	Sep - Dec 2022
3 sections.	Jan - Apr 2023
CSC 311 Introduction to Machine Learning , University of Toronto	
1 section.	Sep - Dec 2022
CS 486/686 Introduction to Artificial Intelligence , University of Waterloo	
2 sections. 167 students. Asynchronous Online.	Sep - Dec 2021
3 sections. 267 students. Asynchronous Online.	May - Aug 2021
2 sections. 194 students. Asynchronous Online.	Jan - Apr 2021
2 sections. 197 students. Asynchronous Online.	Sep - Dec 2020
2 sections. 278 students. Asynchronous Online.	May - Aug 2020

3 sections. 278 students. In-person. Effectiveness Rating: 4.73/5¹. May - Aug 2019
 2 sections. 177 students. In-person. Effectiveness Rating: 4.70/5. Sep - Dec 2018

CS 245 Logic and Computation, University of Waterloo

2 sections. 190 students. In-person. Effectiveness Rating: 4.80/5. Sep - Dec 2019
 1 section. 74 students. In-person. Effectiveness Rating: 4.80/5. May - Aug 2018
 2 sections. 159 students. In-person. Effectiveness Rating: 4.75/5. Sep - Dec 2017

CS 136 Elementary Algorithm Design and Data Abstraction, University of Waterloo

2 sections. 179 students. In-person. Effectiveness Rating: 4.65/5. Jan - Apr 2019
 2 sections. 137 students. In-person. Effectiveness Rating: 4.65/5. Jan - Apr 2018

CPSC 121 Models of Computation, University of British Columbia

1 section. 165 students. In-person. Effectiveness Rating: 4.0/5. Jan - Apr 2017
 1 section. 152 students. In-person. Effectiveness Rating: 4.0/5. Sep - Dec 2016
 1 section. 184 students. In-person. Effectiveness Rating: 3.2/5. Jan - Apr 2016

Teaching Assistant, Harvard University and UBC

- CS 286r. Harvard University. Sep - Dec 2010
 - AM 121 Introduction to Optimization. Harvard University. Jan - Apr 2010
 - CPSC 121 Models of Computation. UBC. 3 semesters. 2004 - 2008

Research Interests

Computer Science Education, Procrastination, Active Learning, Peer Evaluation.

Research Funding

Learning Innovation and Teaching Enhancement (LITE) Seed Grant:
\$6,494 CAD. University of Waterloo. 2021

New Faculty Start-up Grant:
\$15,000 CAD. University of Waterloo. 2017 - 2020

Research Experience

Postdoctoral Fellow, UBC 2014 - 2017
Science Teaching and Learning Fellow, UBC 2016 - 2017
PhD Researcher, Harvard University 2008 - 2014
Research Intern, Microsoft Research, New York, NY, USA May - Aug 2013
Research Intern, Microsoft Research, Cambridge, UK May - Aug 2010

Journal Papers

¹The effectiveness rating is the average rating for the question “Evaluate the overall effectiveness of the instructor as a teacher.” Since May 2020, the teaching evaluation surveys were changed and no longer had a question on the overall effectiveness of the instructor.

Gao, X. A., Wright, J. R., & Leyton-Brown, K. (2019). Incentivizing evaluation with peer prediction and limited access to ground truth. *Artificial Intelligence*, 275, 618–638.

Chen, Y., Gao, X. A., Goldstein, R., & Kash, I. A. (2015). Market manipulation with outside incentives. *Autonomous Agents and Multi-Agent Systems*, 29(2), 230–265.

Conference Papers

Gao, X. A., Mao, A., Chen, Y., & Adams, R. (2014). Trick or treat: putting peer prediction to the test. *Proceedings of the Fifteenth ACM Conference on Economics and Computation*, 507–524.

Gao, X. A., Zhang, J., & Chen, Y. (2013). What you jointly know determines how you act: strategic interactions in prediction markets. *Proceedings of the Fourteenth ACM Conference on Electronic Commerce*, 489–506.

Pfeiffer, T., Gao, X. A., Chen, Y., Mao, A., & Rand, D. G. (2012). Adaptive polling for information aggregation. *Proceedings of the Twenty-Sixth AAAI Conference on Artificial Intelligence*.

Gao, X. A., Bachrach, Y., Key, P., & Graepel, T. (2012). Quality expectation-variance tradeoffs in crowdsourcing contests. *Proceedings of the Twenty-Sixth AAAI Conference on Artificial Intelligence*.

Chen, Y., Gao, X., Goldstein, R., & Kash, I. (2011). Market manipulation with outside incentives. *Proceedings of the Twenty-Fifth AAAI Conference on Artificial Intelligence*.

Gao, X. A., & Chen, Y. (2010). An Axiomatic Characterization of Continuous-Outcome Market Makers. In *International Workshop on Internet and Network Economics* (pp. 505–514). Springer, Berlin, Heidelberg.

Gao, X. A., & Pfeiffer, A. (2010). Learning Game Representations from Data Using Rationality Constraints. *Proceedings of the Twenty-Sixth Conference on Uncertainty in Artificial Intelligence*.

Gao, X., Chen, Y., & Pennock, D. M. (2009). Betting on the real line. In *International Workshop on Internet and Network Economics* (pp. 553–560). Springer, Berlin, Heidelberg.

Students Supervised

Undergraduate Research Assistants supervised at the University of Waterloo:

Joseph Wang	May - Aug 2022
Jackson Woloschuk,	Jan - Aug 2022
Huai Yue (Henry) Li,	Jan - Apr 2020
Xinda Li,	May - Aug 2019
Newton Tran,	May - Aug 2019
Zhengmin Zhang,	Jan - Apr 2019
Richard Cai,	Sep - Dec 2018
Yucheng Wang,	May - Aug 2018

Undergraduate Students supervised at UBC and Harvard University:

David Bole Ma, UBC	Oct 2016 - Aug 2017
Karan Grover, UBC	May - Dec 2016
Patrick Wan-hin Luk, UBC	May - Aug 2015
Rick Goldstein, Harvard University	Jan - Apr 2010

Selected Events and Talks

Organizer, WiCS Planning for Your Degree Event, University of Waterloo	Sep 2021
Panelist, Women in Tech Panel, Canadian Undergraduate Technology Conference	Jul 2021
WiCS Instagram Takeover, University of Waterloo	May 2021
Organizer, WiCS Time Management Panel, University of Waterloo	Mar 2021
Organizer, WiCS Co-op Panel, University of Waterloo	Jan 2021
Talk on Peer Grading, Teaching Seminar, Faculty of Mathematics, UW	Mar 2019
Young Researcher Econ-CS Workshop, Tel-Aviv, Israel	Jan 2017
SIGAI Career Network and Conference	Oct 2016
2nd Workshop on Algorithmic Game Theory and Data Science, ACM EC	Jul 2016
Artificial Intelligence Seminar (LCI Forum), University of British Columbia	May 2016
“Information Elicitation and Aggregation” session, INFORMS	Nov 2015
SIGAI Career Network Conference	Jan 2015
Advisor for new graduate students, Harvard SEAS Connect program,	2013
Host for new international students, Harvard GSAS Host Student Program,	2012 and 2010

Awards and Honours

2015 SIGecom Doctoral Dissertation Award runner-up	2015
IFAAMAS-14 Victor Lesser Distinguished Dissertation Award runner-up	2015
Canadian NSERC Postdoctoral Fellowship	2014 - 2016
Siebel Scholarship	2014
Canadian NSERC Postgraduate Scholarship for Doctoral Students	2010 - 2013
Computer Science, Charles and Jane Banks, & Trek Excellence Scholarships, UBC	2007 - 2008
NSERC Undergraduate Student Research Award, Extreme Blue Program, IBM	2007
Undergraduate Scholar Program Scholarship, UBC	2003 - 2006

Reviewers and Program Committee Memberships

Program Committee:

Canadian AI (2020, 2019)
 AAI (2019, 2016, 2014, 2013)
 ACM EC (2018, 2016, 2015)
 IJCAI (2016, 2015 Computational Sustainability Track)
 AAMAS (2015 Innovative Applications Track)
 The joint AAMAS-IJCAI workshop on Agents and Incentives in AI (AI³)

Reviewer for journals:

TEAC (Transactions on Economics and Computation)
 AIJ (Artificial Intelligence Journal)
 JAAMAS (Journal of Autonomous Agents and Multi-Agent Systems)

Reviewer for conferences:

WINE (2014, 2013),
HCOMP (2013, 2012),
UAI 2010,
NESCAI 2010